SAFETY DATA SHEET - Ionic Support Material

Section 1: Identification of the substance and Preparation

1.1: Product Identifiers

Product name: Product name: Ionic Hi-Temp Hybrid Support Material

1.2: Relevant identified uses of the substance or mixture and uses advised against

Identified uses: 3D printing filament. Material for 3D printing FDM applications.

1.3: Details of the supplier of the Safety Data Sheet

Company identification:

MatterHackers inc.

27156 Burbank

Foothill Ranch, CA

92610

Email: support@matterhackers.com

Section 2: Hazard(s) identification

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2.1: Classification of the substance or mixture:

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies. This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

2.2: Label elements: Label according to Regulation (EC) No. 1272/2008 as amended Contains: Polyvinyl alcohol compound Hazard pictograms None. Signal word None. Hazard statements The mixture does not meet the

criteria for classification. Precautionary statements Prevention Use personal protective equipment as required. Response No specific first aid measures noted. Storage Store in a dry area. Store in a closed container. Disposal Dispose of waste and residues in accordance with local authority requirements.

2.3: Other Hazards: Fine particles may form explosive mixtures with air. This material does not ignite easily; however, feasible precautions against dust explosion are recommended.

Section 3: Composition/Information on ingredients

Description:

Chemical Name	CAS-No. EC-No. Registration number	Classification (1272/2008/EC)	Concentration [%]
Polyvinyl alcohol Methanol (impurity)	N/A 67-56-1 200-659-6	Flam. Liq. 2;H225, Acute Tox. 3;H301, Acute Tox. 3;H311, Acute Tox. 3;H331, STOT SE 1;H370	>95% <1%
Styrene	100-42-5 202-851-5	Flam. Liq. 3 /H226 Acute Tox. 4 /H332 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Repr. 2 / H361d	Trace <0,001%

Section 4: First aid measures

4.1: Description of first aid measures

General Advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Wash skin with plenty of water. With prolonged skin irritation, seek first aid or medical attention. After contact with the molten product, cool rapidly with cool water, do not pull solidified product from the skin and seek medical treatment.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician.

Ingestion: If swallowed, seek medical attention.

4.2: Most important symptoms and effects, both acute and delayed

No further relevant information available

4.3: indication of medical attention and special treatment needed

No further relevant information available

Section 5: Firefighting measures

5.1: Extinguishing media

Suitable extinguishing media: Water spray, Foam, Dry powder, Carbon dioxide (CO_2).

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire

5.2: Special hazards arising from the substance or mixture

In case of fire may be liberated: hydrogen cyanide, carbon monoxide and carbon dioxide (CO_2). In case of dust (Fine dust): danger of dust explosion

5.3 Advice for firefighters

Fire fighting measures: Wear a self-contained breathing apparatus and chemical protective clothing.

Unusual Fire Hazards: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. In the event of fire and/or explosion do not breathe fumes.

Section 6: Accidental release measures

6.1: Personal precautions, protective equipment and emergency procedures

Use self-contained breathing apparatus and protective fire fighting clothes

6.2: Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains

6.3: Methods and materials for containment and cleaning up: Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.
Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Section 7: Handling and storage

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7.1: Precautions for safe handling: General Handling: Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges
when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Explosion-proof general and local exhaust ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices

7.2: Conditions for safe storage, including any incompatibilities storage

Requirements for storerooms and containers: Store in a well-ventilated place. Keep container tightly closed. Protect against heat /sun rays. Protect from moisture contamination.

Storage class:

11 = Combustible solids

Advice on common storage:

Keep away from oxidising agents and strongly acid or

alkaline materials. Keep away from food, drink and animal feedingstuffs.

Storage temperature:

<= 40 °C

Other data:

No decomposition if stored and applied as directed

Section 8: Exposure controls/personal protection

8.1: Control parameters

CAS no.	Designation	Type	Limitvalue
67-56-1	Methanol	2006/15/EC	TWA: 266 mg/m3, 200 ppm Sk; STEL: 333 mg/m3, 250 ppm Sk;
100-42-5	Styrene	Great Britain: WEL-STEL Great Britain: WEL-TWA Ireland: 15 minutes Ireland: 8 hours	1 080mg/m³; 250 ppm 430 mg/m³; 100 ppm 170 mg/m³; 40 ppm 85 mg/m³; 20 ppm
-	Dust	TWA	4 mg/m3 Respirable dust 10 mg/m3 Inhalable dust

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring

Follow standard monitoring procedures.

Derived no-effect level (DNEL)

Not available.

Predicted no effect concentrations (PNECs)

Not available.

8.2: Exposure Controls:

Personal protection

Eye/Face Protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: No precautions other than clean body-covering clothing should be needed.

Hand protection: Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized. Use gloves with insulation for thermal protection (EN 407), when needed. Use gloves to protect from mechanical injury. Selection of gloves will depend on the task.

Respiratory Protection: Not necessary if room is well ventilated.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be

sufficient for most operations.

Section 9: Physical and chemical properties

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9.1: Information on basic physical and chemical properties

Appearance

Physical state: solid

Color: Translucent/Natural

Odor: Nearly odorless

Odor threshold: N/A

pH: N/A

Melting point: > 200 °C (DIN EN ISO 306)

Freezing point: N/A

Boiling point: N/A

Flash point: > 400 °C

Flammability: N/A

Specific Gravity: 1.04g/cc

Solubility in water: Insoluble

Autoignition: Product is not self igniting

Decomposition Temp: >300°C

Oxidizing properties: N/A

Explosive properties: Product is not explosive

Section 10: Stability and reactivity

10.1: Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2: Chemical stability

Stable under recommended storage conditions.

10.3: Possibility of hazardous reactions

In case of dust (Fine dust): danger of dust explosion

10.4: Conditions to Avoid

Avoid elevated temperatures for prolonged periods of time.

10.5: Incompatible Materials

Strong acids, strong oxidizing agents

10.6: Hazardous decomposition products

In case of fire may be liberated: Carbon oxides.

Thermal decomposition: approx. 300 °C

Material becomes insoluble after overheating

Section 11: Toxicological information

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11.1: Information on toxicological effects

Toxicological effects:

Methanol (impurity) (CAS 67-56-1)

Acute toxicity (oral): LD50 Rat 1187 - 2769 mg/kg

Acute toxicity (dermal): LD50 Rabbit 17100 mg/kg

Acute toxicity (inhalative): LC50 Rat 128200 mg/m³, 4 Hours

Skin corrosion/irritation: Lack of data. May cause irritations.

Eye damage/irritation: Lack of data. May cause irritations.

Sensitisation to the respiratory tract:

Not a respiratory sensitiser.

Skin sensitisation: Lack of data. Not to be expected

Germ cell mutagenicity/Genotoxicity:

No data available to indicate product or any components

present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: Not classifiable as to carcinogenicity to humans

Reproductive toxicity: Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure):

Lack of data.

Dusts: Possible Irritating to eyes, respiratory system and skin.

Specific target organ toxicity (repeated exposure):

Lack of data.

Aspiration hazard: Not an aspiration hazard.

Other information:

Not available

Section 12: Ecological information

12.1: Toxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

		Species	Results
Algea	EC50	Algae	22000 mg/l, 96 hours
Crustacea	EC50	Daphnia Magna	> 10000 mg/l, 48 hours
Fish	LC50	Lepomis Macrochirus	15400 mg/l, 96 hours

12.2: Persistence and degradability

No data is available on the degradability of this product.

12.3: Bioaccumulative potential

No data available.

12.4: Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component

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Section 13: Disposal considerations

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13.1: Waste treatment methods

Residual waste

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see:Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14: Transport information

Not Classified – not considered hazardous based on available data

Product has been classified as being non-dangerous substance according to transport regulations ADR, RID, IMDG, IATA/ICAO

Section 15: Regulatory information

15.1: Safety, health and environmental regulations specific for the substance or mixture

Directive 96/82/EC: Update: 2003

Directive 96/82/EC does not apply

Further information: Reserved for industrial and professional use.

Section 16: Other information

The information herein is based on our present knowledge and given in good faith, but no warranty, express or implied, is made.

Contact support@matterhackers.com for more information..